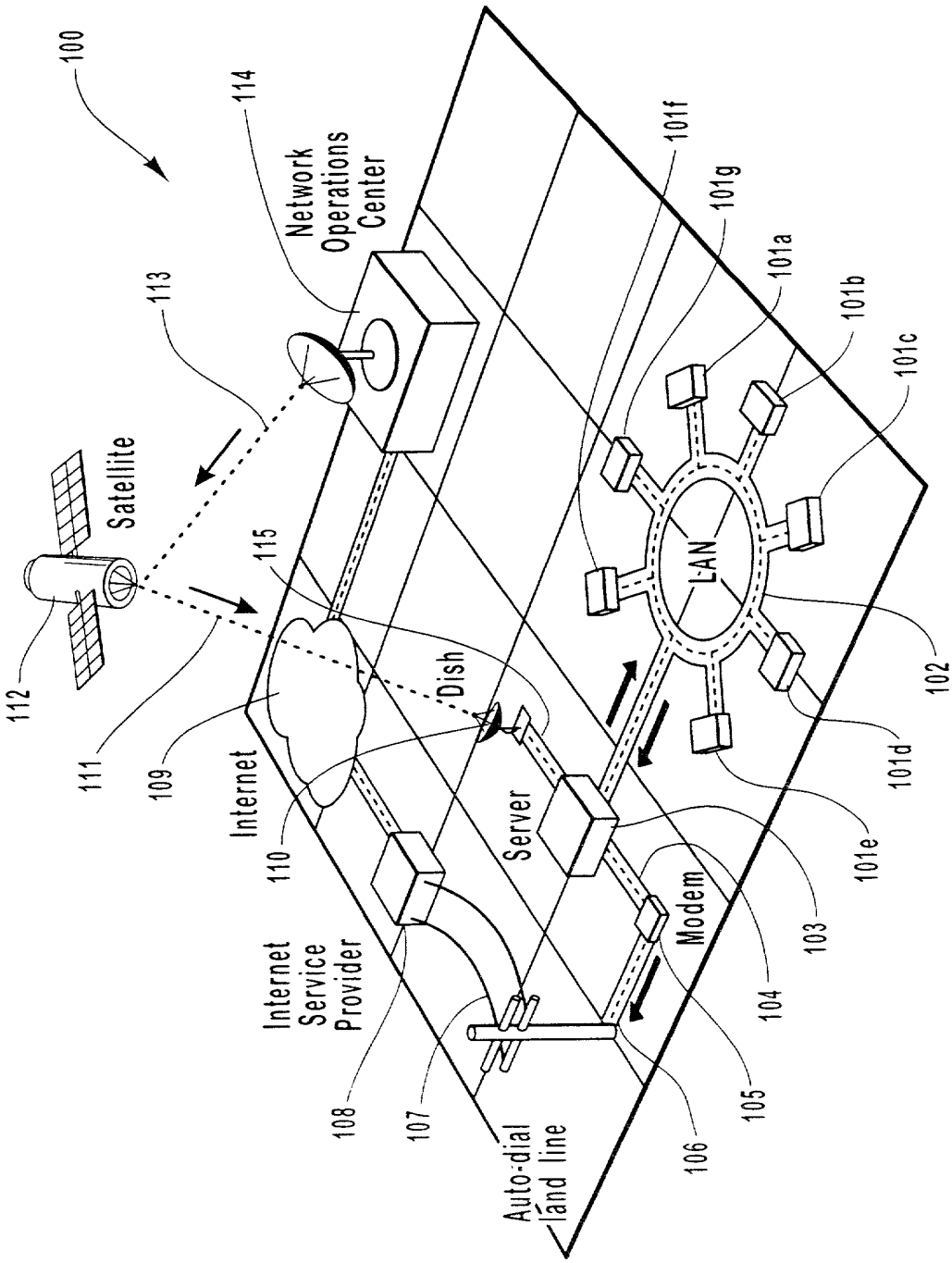
100
114
Network Operations Center
113
Satellite
112
115
111
109
Internet
110
Dish
Server
Modem
LAN
101f
101g
101a
101b
101c
102
101d
101e
103
104
105
106
107
108
Internet Service Provider
Auto-dial land line

Fig. 1

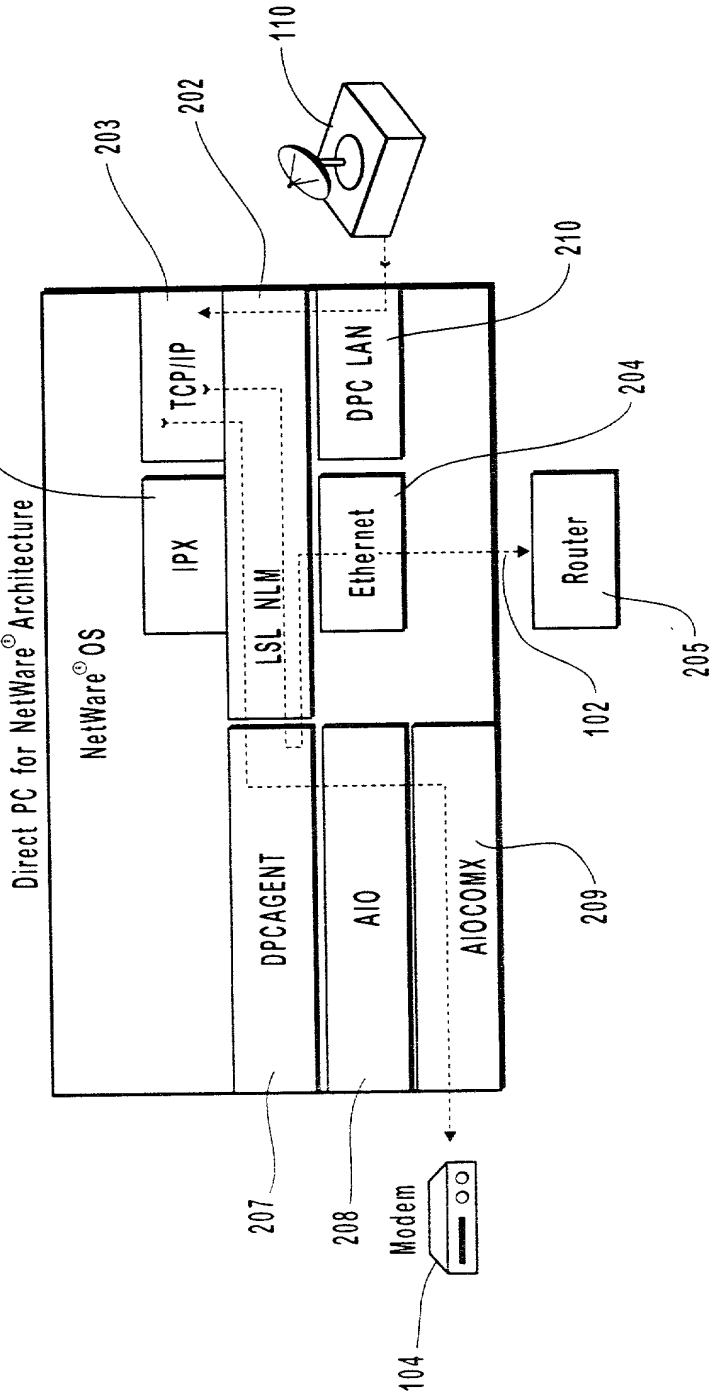
Direct PC for NetWare® Architecture
NetWare® OS
IPX
TCP/IP
LSL NLM
DPC LAN
Ethernet
Router
DPCAGENT
AIO
AIOCOMX
Modem
110
202
203
210
204
206
205
102
209
207
208
104

Fig. 2

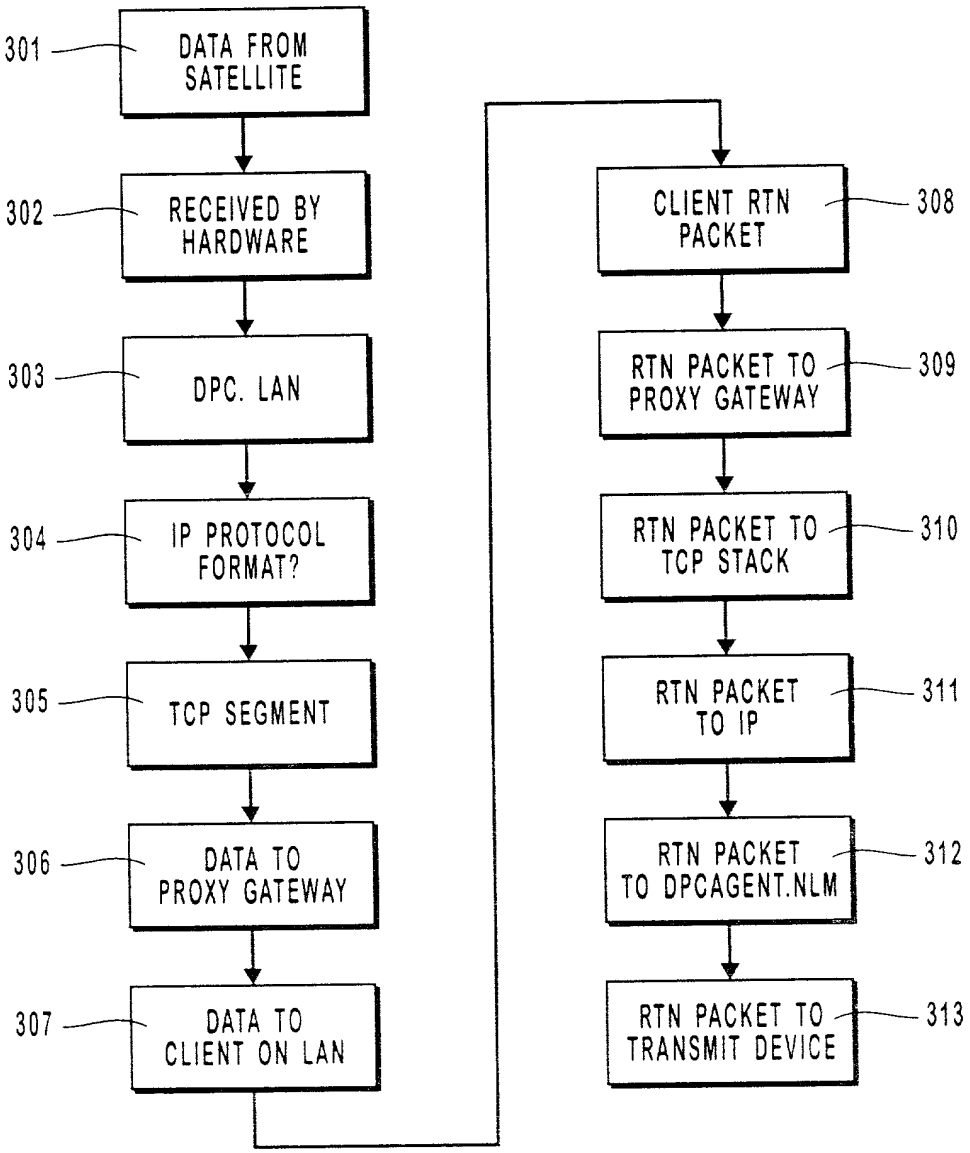
301
DATA FROM SATELLITE
302
RECEIVED BY HARDWARE
303
DPC. LAN
304
IP PROTOCOL FORMAT?
305
TCP SEGMENT
306
DATA TO PROXY GATEWAY
307
DATA TO CLIENT ON LAN
308
CLIENT RTN PACKET
309
RTN PACKET TO PROXY GATEWAY
310
RTN PACKET TO TCP STACK
311
RTN PACKET TO IP
312
RTN PACKET TO DPCAGENT.NLM
313
RTN PACKET TO TRANSMIT DEVICE

Fig. 3

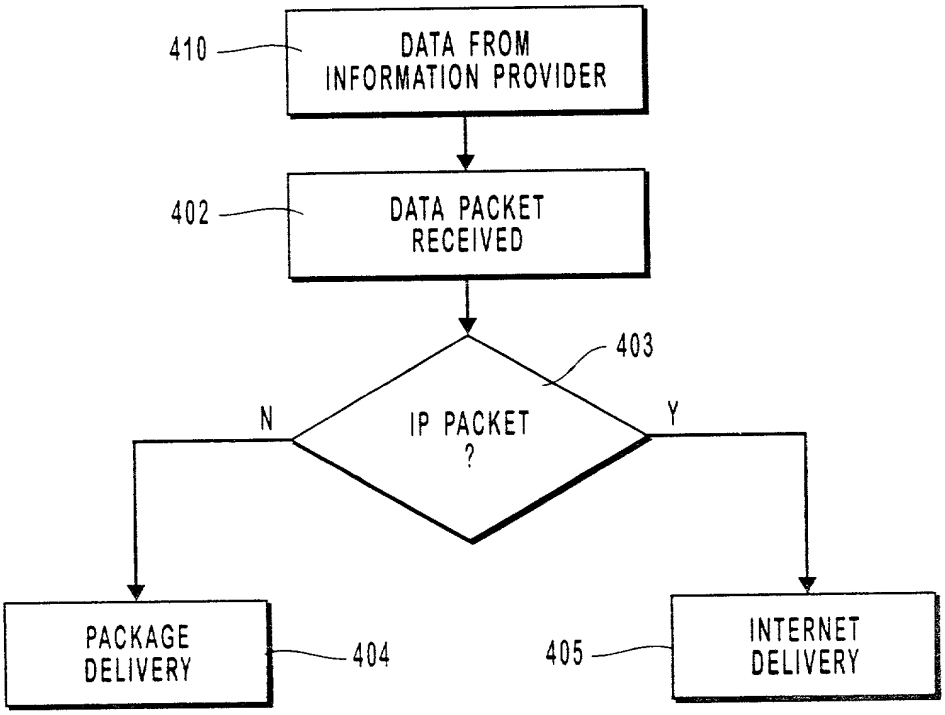
410
DATA FROM INFORMATION PROVIDER
402
DATA PACKET RECEIVED
403
IP PACKET ?
N
Y
PACKAGE DELIVERY
404
405
INTERNET DELIVERY

Fig. 4

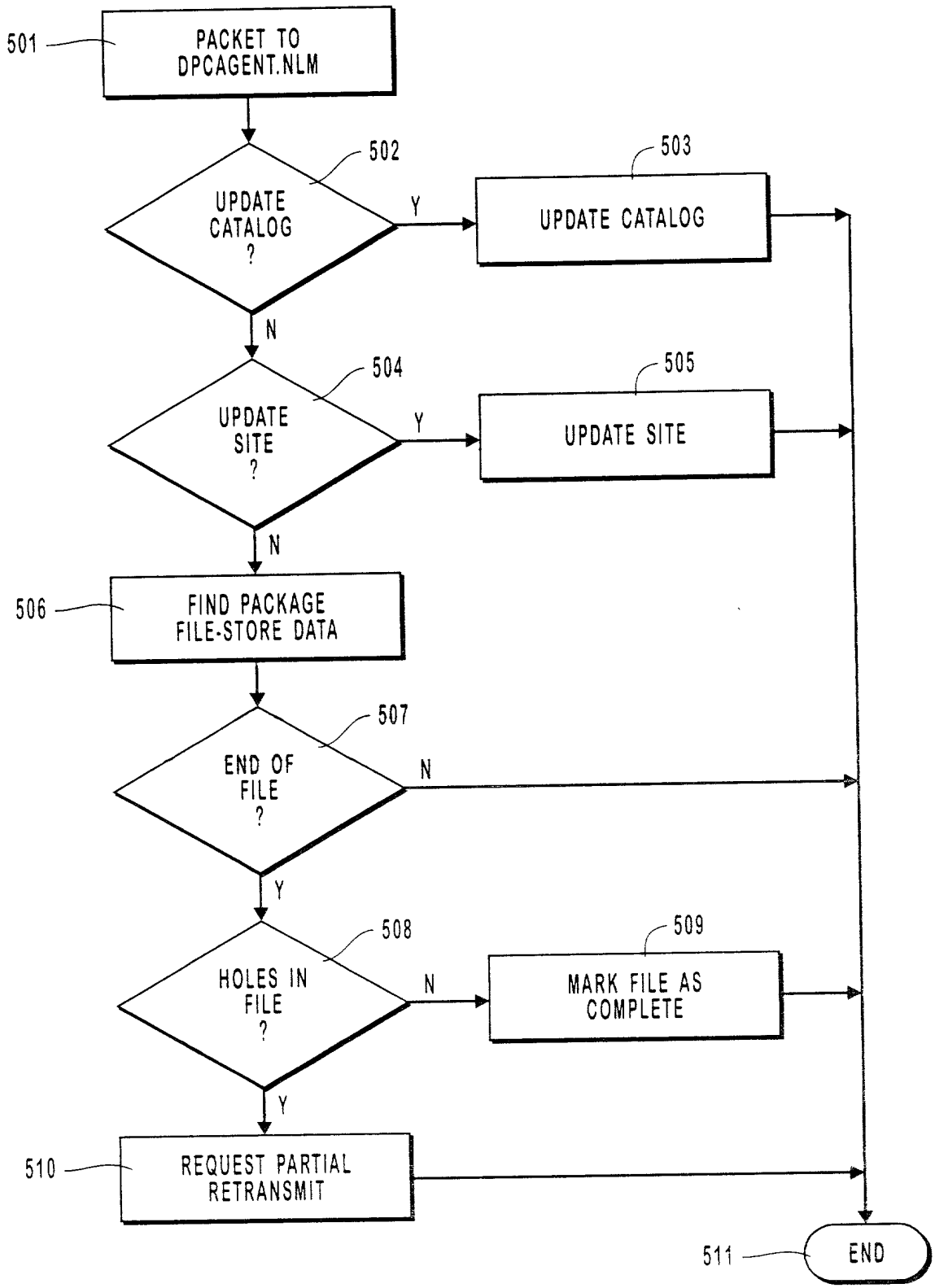
501
PACKET TO DPCAGENT.NLM
502
UPDATE CATALOG ?
Y
503
UPDATE CATALOG
N
504
UPDATE SITE ?
Y
505
UPDATE SITE
N
506
FIND PACKAGE FILE-STORE DATA
507
END OF FILE ?
N
Y
508
HOLES IN FILE ?
N
509
MARK FILE AS COMPLETE
Y
510
REQUEST PARTIAL RETRANSMIT
511
END

Fig. 5

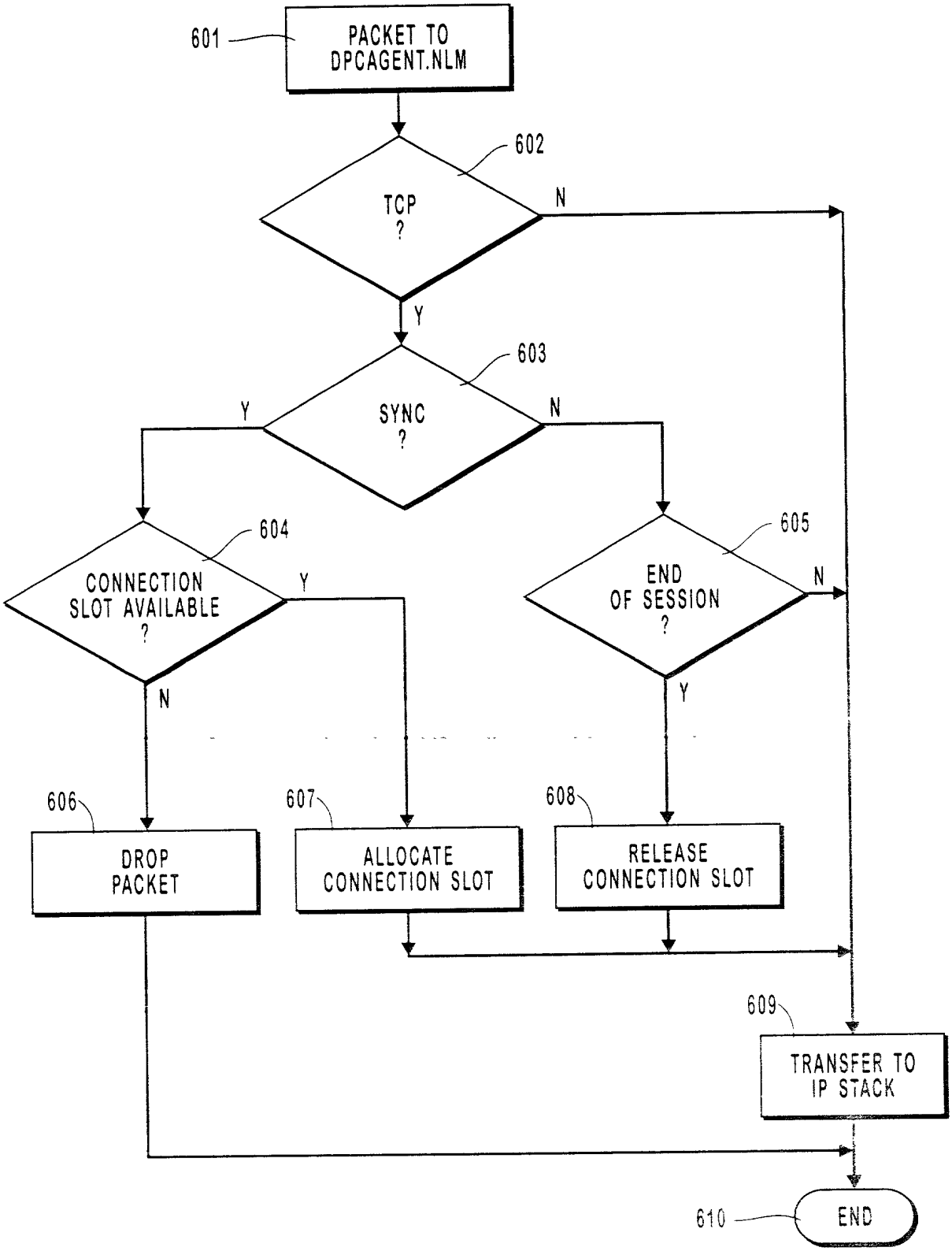
601
PACKET TO DPCAGENT.NLM
602
TCP ?
N
Y
603
SYNC ?
Y
N
604
CONNECTION SLOT AVAILABLE ?
Y
N
605
END OF SESSION ?
N
Y
606
DROP PACKET
607
ALLOCATE CONNECTION SLOT
608
RELEASE CONNECTION SLOT
609
TRANSFER TO IP STACK
610
END

Fig. 6

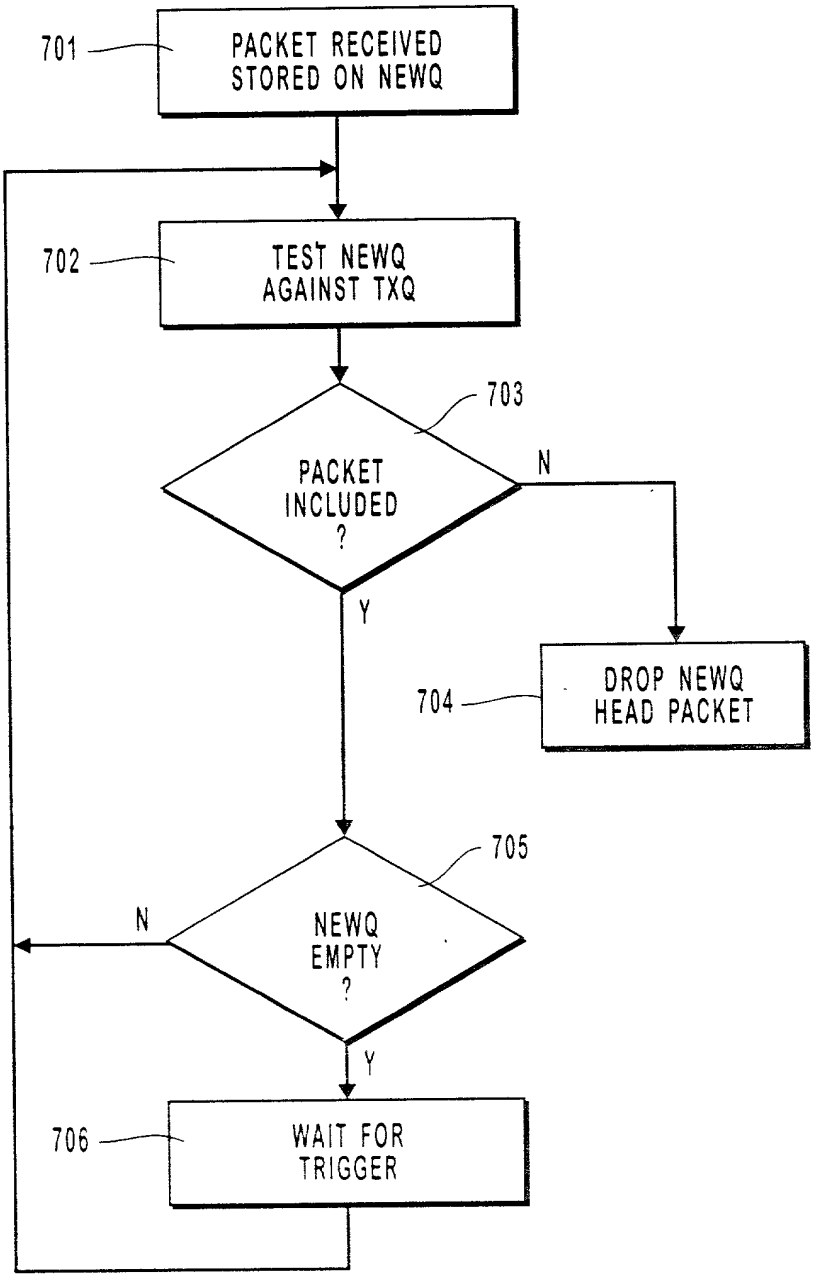
701
PACKET RECEIVED STORED ON NEWQ
702
TEST NEWQ AGAINST TXQ
703
PACKET INCLUDED ?
N
Y
704
DROP NEWQ HEAD PACKET
705
NEWQ EMPTY ?
N
Y
706
WAIT FOR TRIGGER

Fig. 7

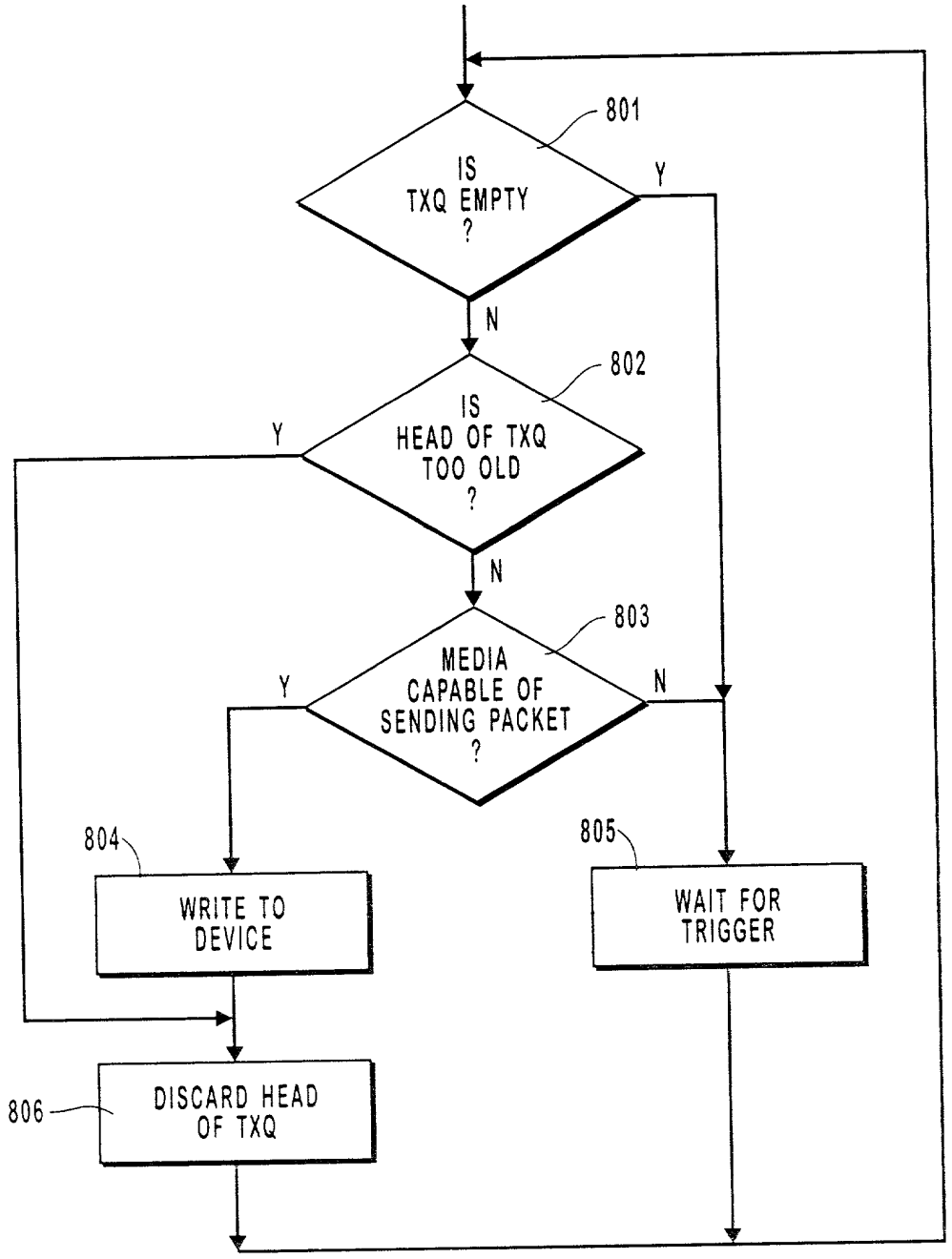
801
IS
TXQ EMPTY
?
Y
N
802
IS
HEAD OF TXQ
TOO OLD
?
Y
N
803
MEDIA
CAPABLE OF
SENDING PACKET
?
Y
N
804
WRITE TO
DEVICE
805
WAIT FOR
TRIGGER
806
DISCARD HEAD
OF TXQ

Fig. 8

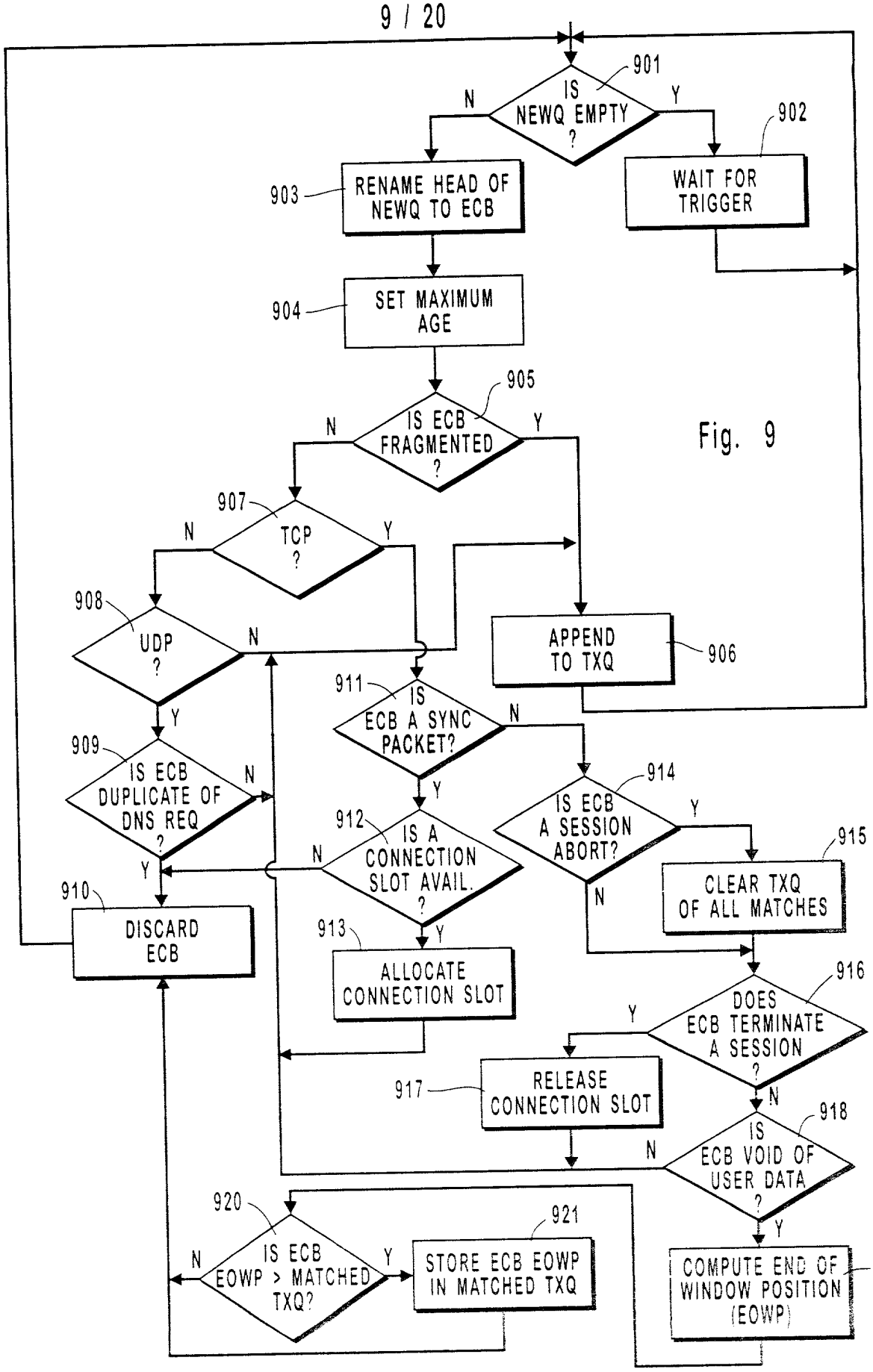
901
IS NEWQ EMPTY ?
N
Y
902
WAIT FOR TRIGGER
903
RENAME HEAD OF NEWQ TO ECB
904
SET MAXIMUM AGE
905
IS ECB FRAGMENTED ?
907
TCP ?
908
UDP ?
909
IS ECB DUPLICATE OF DNS REQ ?
910
DISCARD ECB
906
APPEND TO TXQ
911
IS ECB A SYNC PACKET?
912
IS A CONNECTION SLOT AVAIL. ?
913
ALLOCATE CONNECTION SLOT
914
IS ECB A SESSION ABORT?
915
CLEAR TXQ OF ALL MATCHES
916
DOES ECB TERMINATE A SESSION ?
917
RELEASE CONNECTION SLOT
918
IS ECB VOID OF USER DATA ?
919
COMPUTE END OF WINDOW POSITION (EOWP)
920
IS ECB EOWP > MATCHED TXQ?
921
STORE ECB EOWP IN MATCHED TXQ

Fig. 9

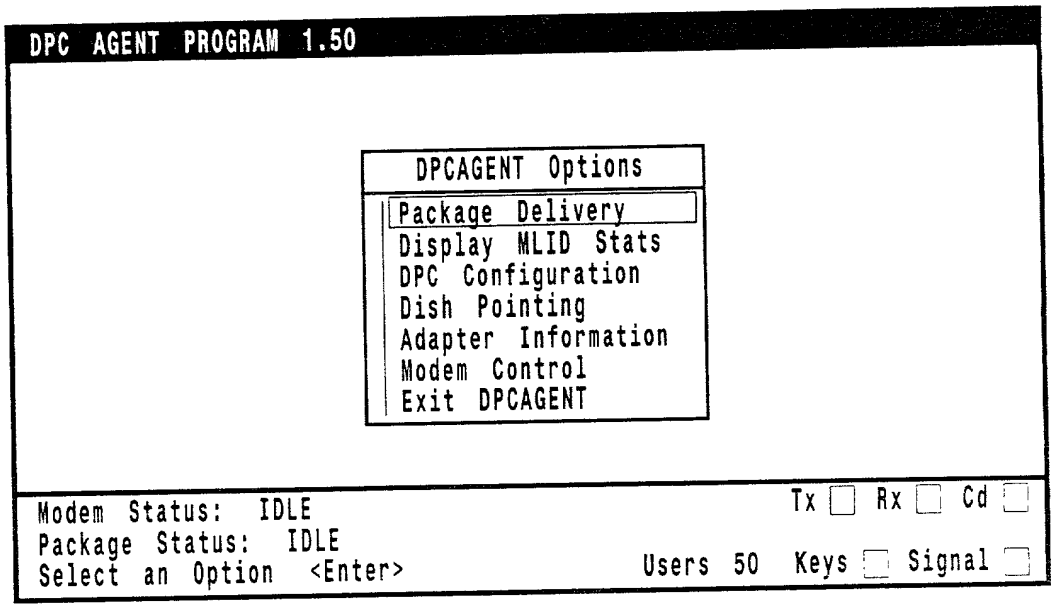


Fig. 10a-1

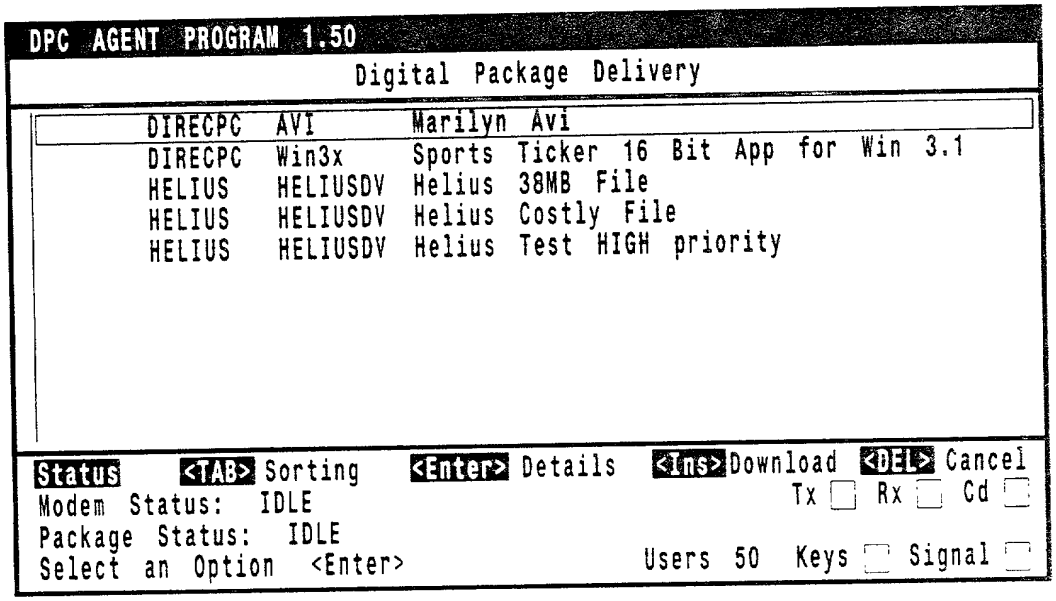


Fig. 10a-2

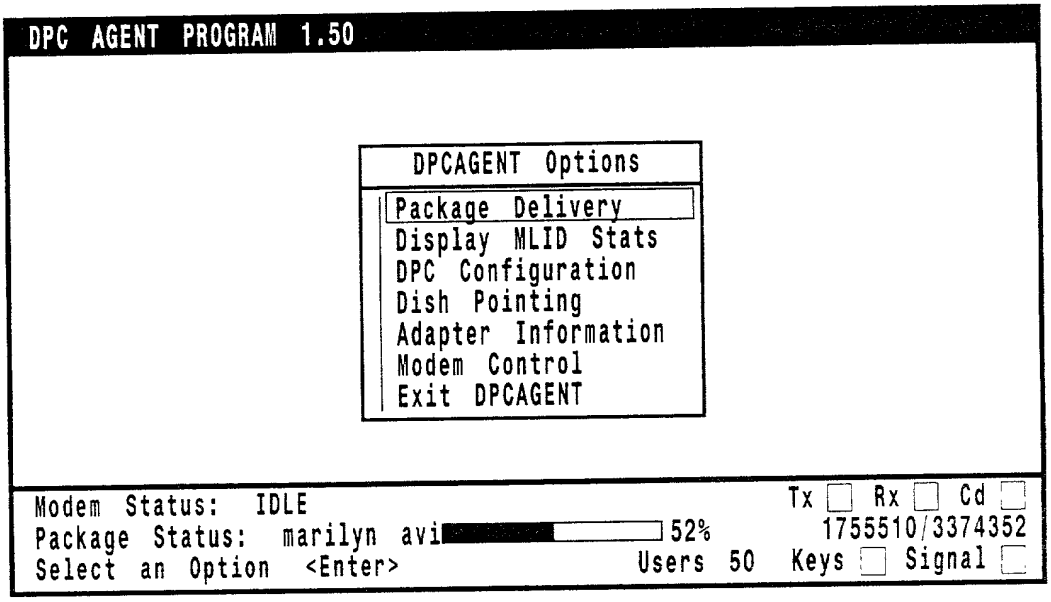


Fig. 10b-1

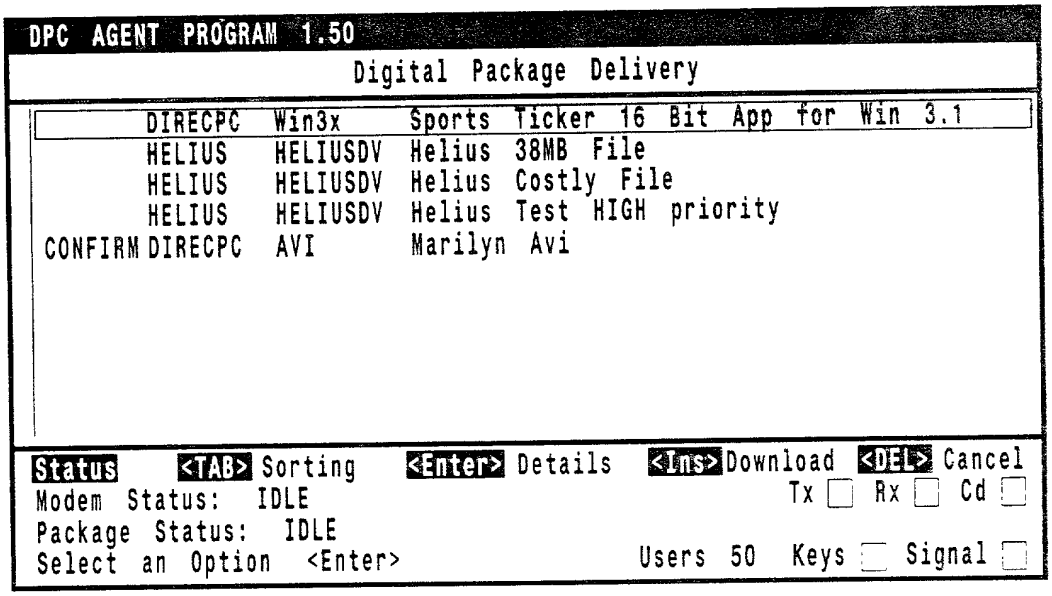


Fig. 10b-2

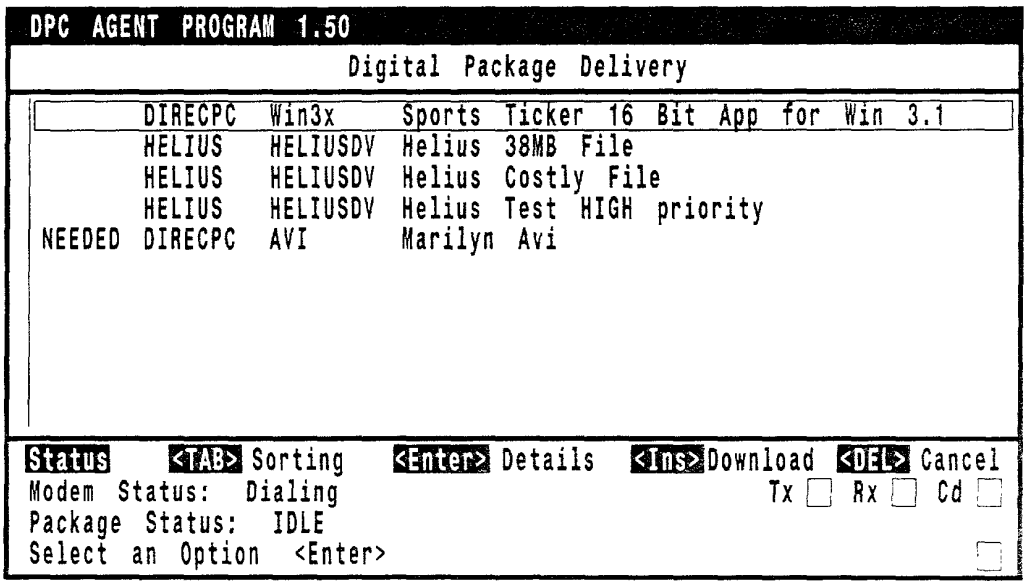


Fig. 10c-1

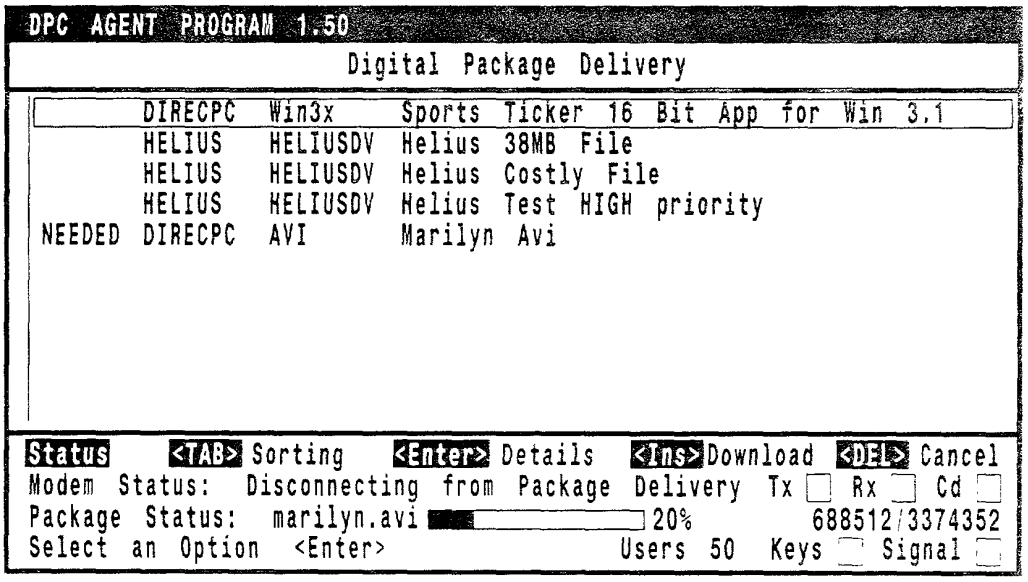


Fig. 10c-2

```
DPC AGENT PROGRAM 1.50
        DPC_1_EII [DPc port=140 int=B frame=ETHERNET_II]

Version 1.20
Node Address: 80AE000001
Protocols:
   ARP
   IP
Generic statistics
   Total packets sent:                                  1
   Total packets received:                              0
   No ECB available count:                              0
   Send packet too big count:                           0
   Reserved:                                Not Supported
   Receive packet overflow count:                       0
   Receive packet too big count:                        0
   Receive packet too small count:          Not Supported
   Send packet miscellaneous errors:                    0
   Receive packet miscellaneous errors:                 0

Modem Status:  IDLE                          Tx [ ] Rx [ ] Cd [ ]
Package Status:  IDLE
Select an Option  <Enter>          Users 50  Keys [ ] Signal [ ]
```

Fig. 10d-1

```
DPC AGENT PROGRAM 1.50
        DPC_1_EII [DPc port=140 int=B frame=ETHERNET_II]

   Send abort from excessive deferral                   0
   Receive abort from bad frame alignment               0

Custom statistics
   Signal Quality                                     235
   Rx Frequency                                    13,300
   Largest Received IP Frame                            0
   Number of Receive IP Frames over 400                 0
   Ave size of Receive IP frames over 400               0
   Mips Rx enable commands                              0
   Mips Rx disable commands                             0
   Mips frames accepted                             6,962
   Mips frames rejected from no filter match    1,489,475
   Mips frames rejected from zero address               0
   Mips frames rejected from adapter disabled           0
   Mips frames rejected from low buffer pool    3,611,966

Modem Status:  IDLE                          Tx [ ] Rx [ ] Cd [ ]
Package Status:  IDLE
Select an Option  <Enter>          Users 50  Keys [ ] Signal [ ]
```

Fig. 10d-2

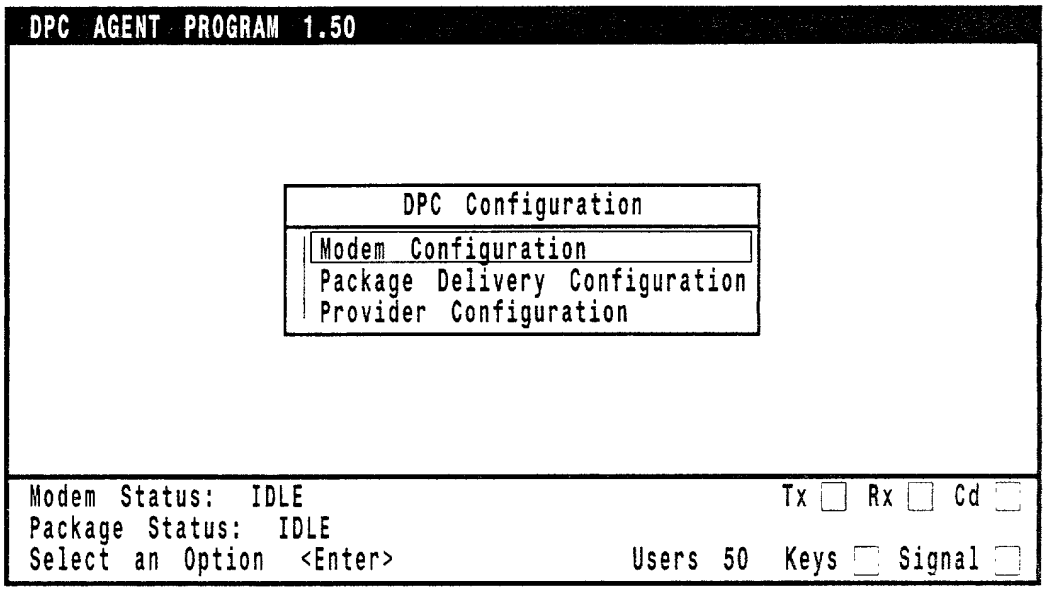


Fig. 10e-1

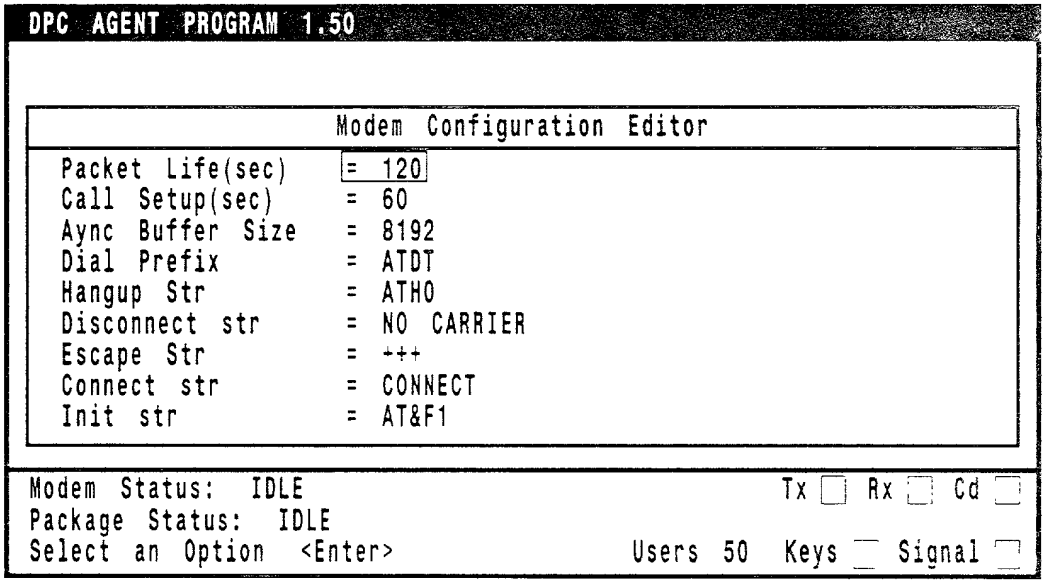


Fig. 10e-2

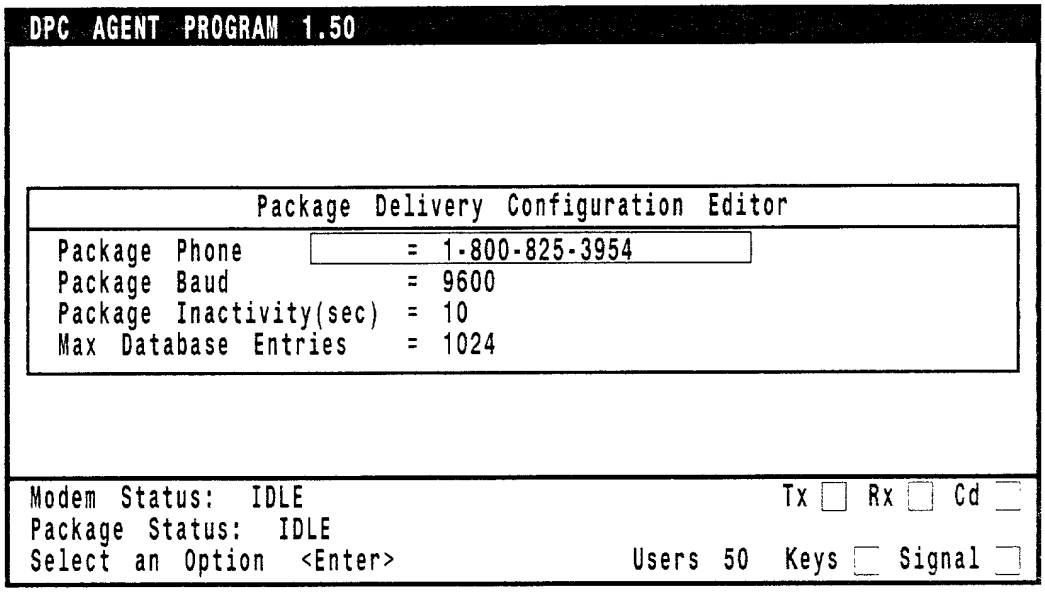


Fig. 10f-1

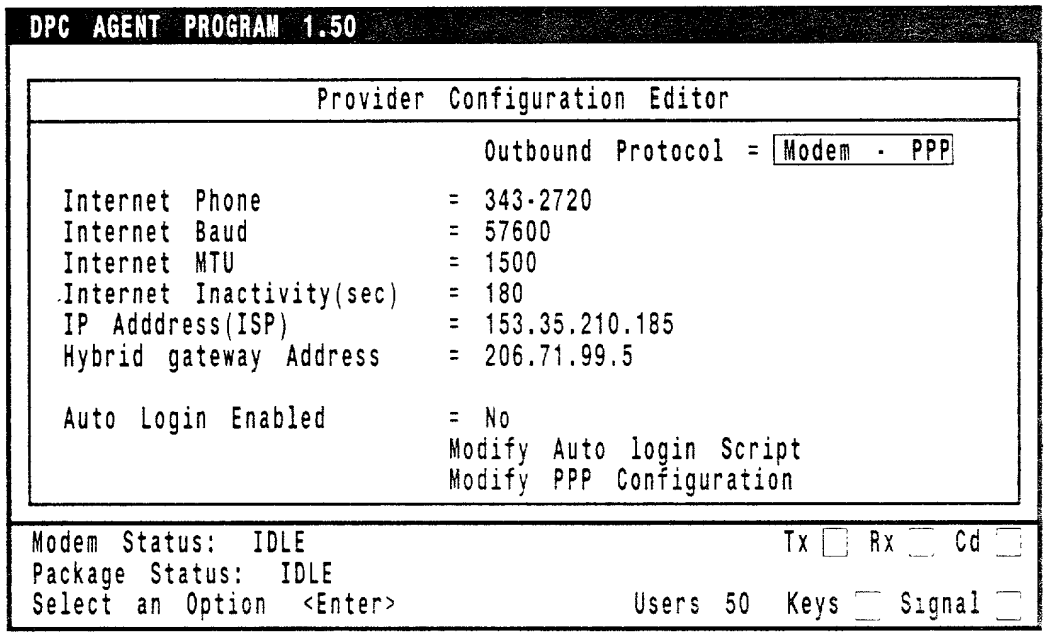


Fig. 10f-2

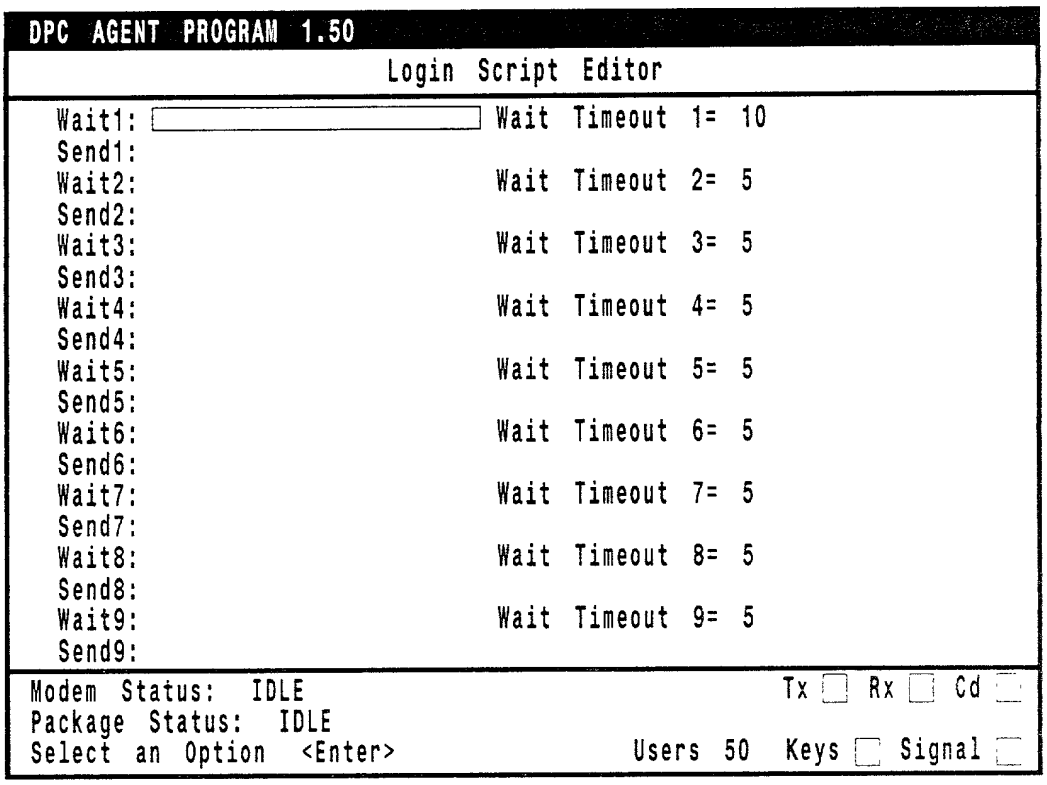


Fig. 10g-1

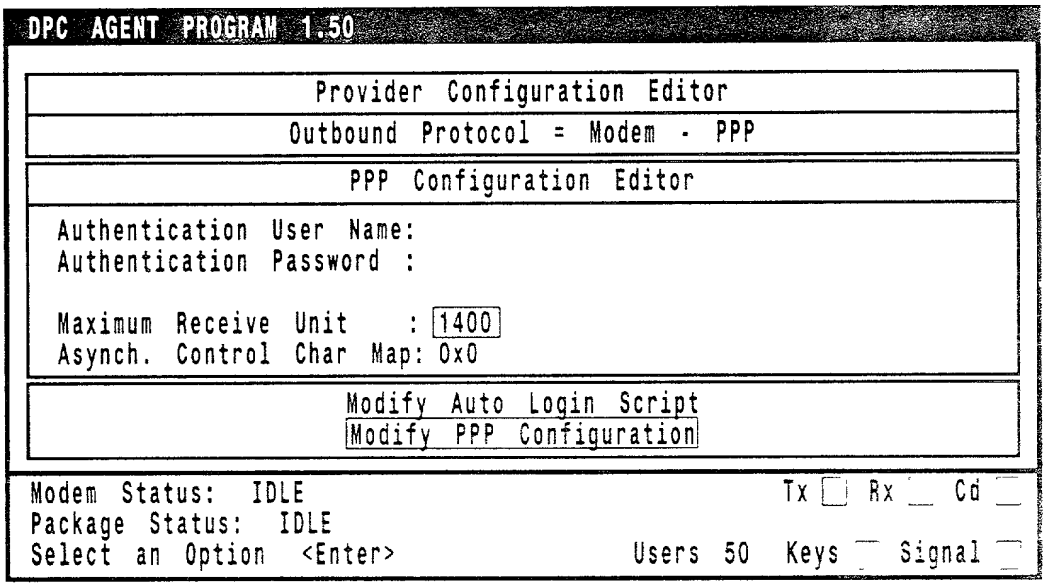


Fig. 10g-2

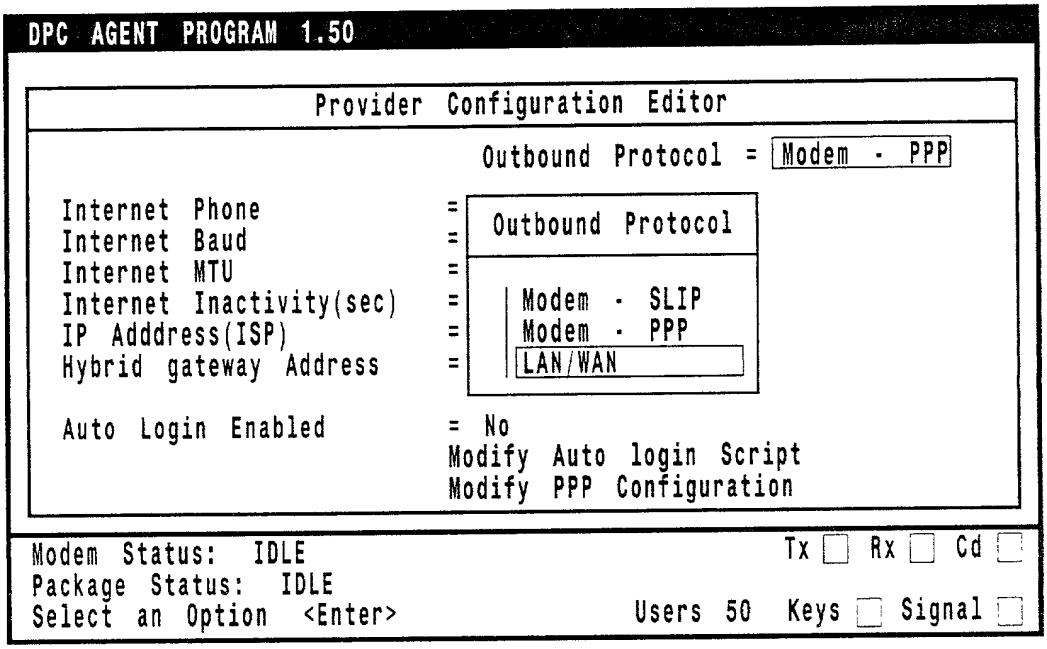


Fig. 10h-1

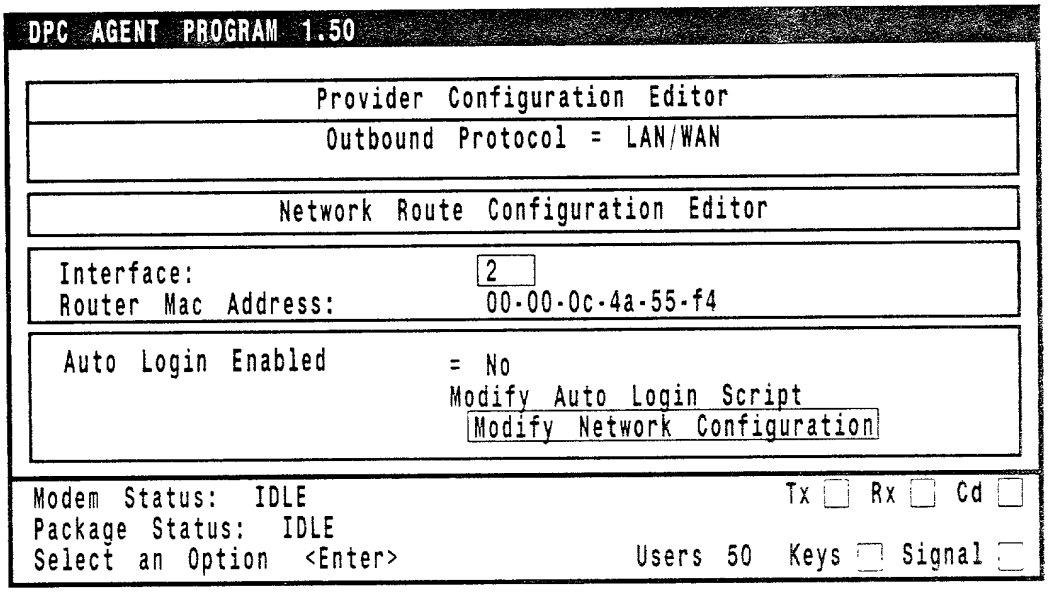


Fig. 10h-2

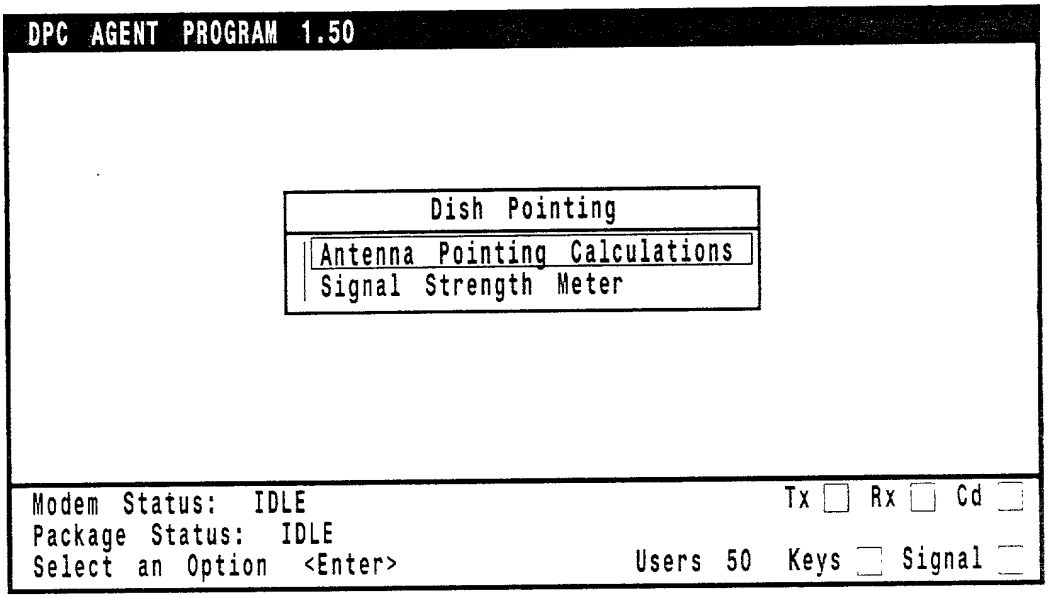


Fig. 10i-1

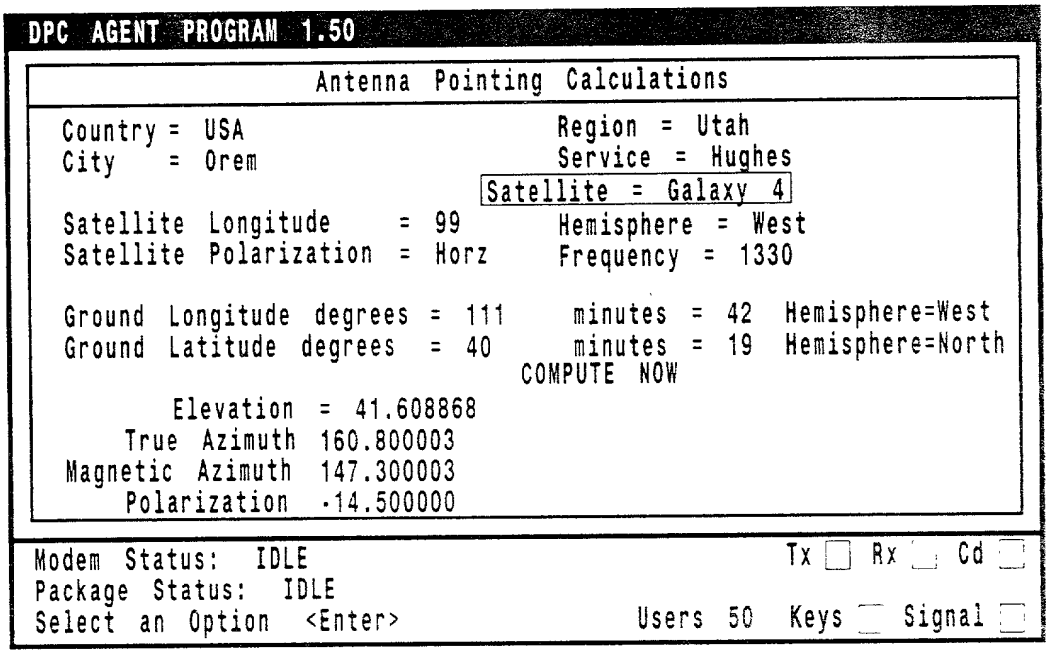


Fig. 10i-2

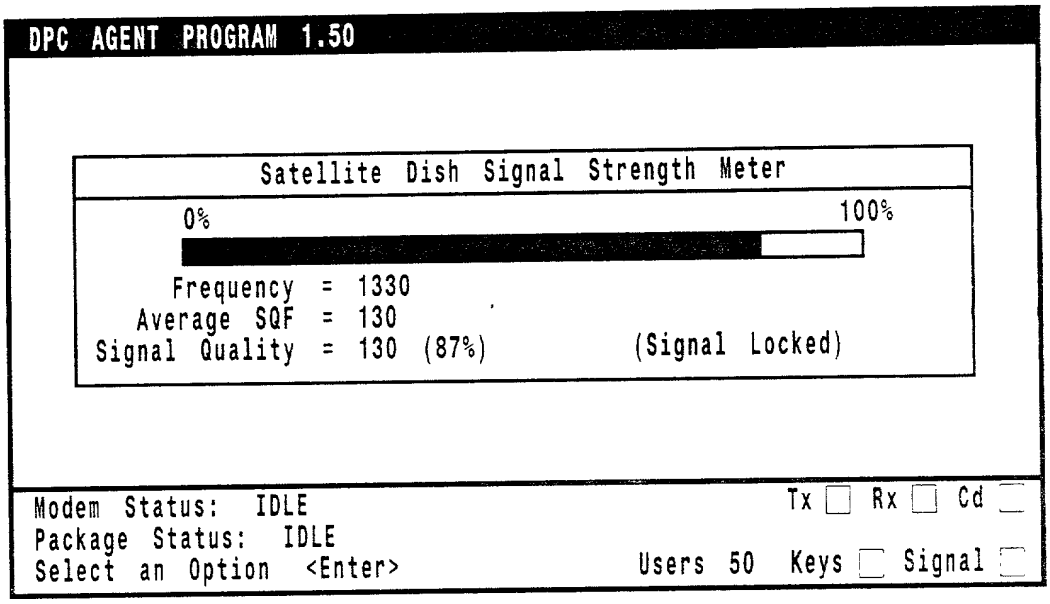


Fig. 10j-1

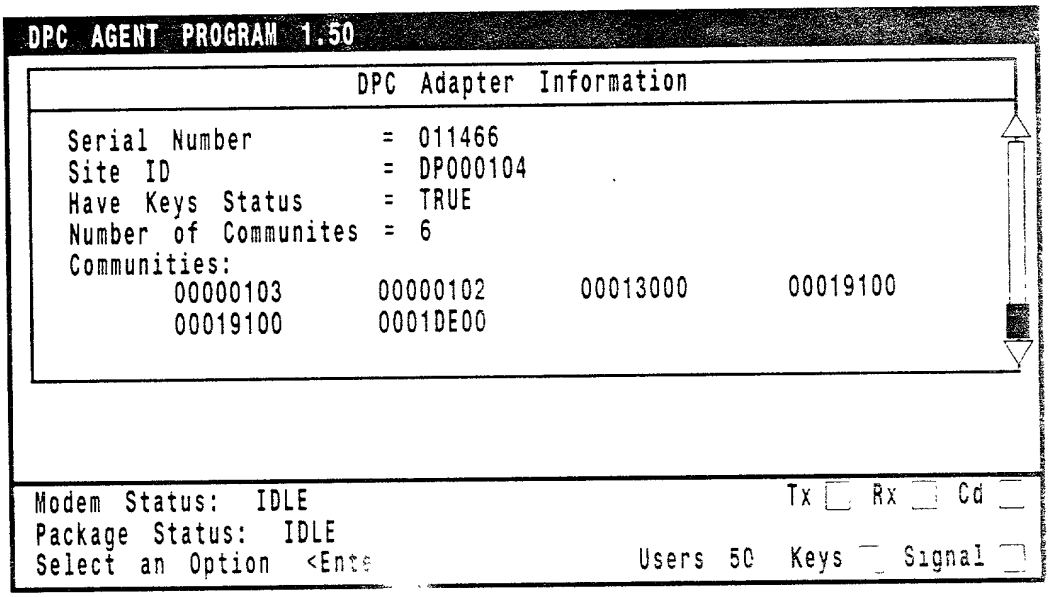


Fig. 10j-2

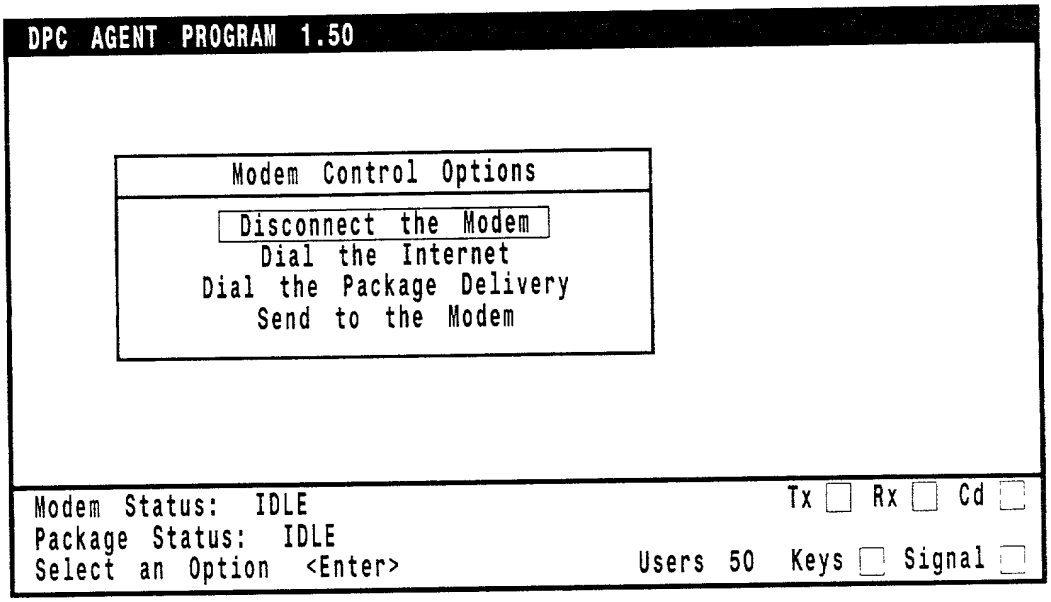


Fig. 10k

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